

Work Order ID 69666

Monday, May 16, 2011 9:19:50 AM



Page 1

Item ID: D206-642-341

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 5/16/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/3/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date: 11-05-16

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D2650

F

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels per PPP D206-642-341 CHG003

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & Initial*all entries

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Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00



Skidtubes

0.00

Skidtubes

Memo

1-Deburr Fwd edge of tube

DL 11/05/04

2-Remove ridge on inside of Fwd edge of tube as per Dwg D2650

DL 11/05/04

3-Weld Fwd Cap as per Dwg D2650. Use aluminum rod. Grind D2647 to fit as required.

A/R ☐ Aluminum Rod ☐

M112860 / M117456 BE 11/06/01

4-Grind weld flush to cap on top surface only.

BE 11/06/01

5-Cut aft end to length as per dwg D2650

6-Drill pilot holes using drill Jig DT8168A (A.& B) and DT8025. Open to Ø0.312"

7-Drill holes for wearplates using DT 8028-5. Open to Ø 0.297".

8-Open Aft Cap Hole using #6 Drill Bit

9-Open holes for Tow Ring to Ø0.625" as per Dwg D2650, D2650-5 Drilling Detail

10-Remove inner indexing ridge on aft end of skidtube as per Dwg D2650

11-Deburr and Blow out all chips from inside the tube

DL 11/06/02

| W/O: | | WORK ORDER CHANGES | | | | | |
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Start Date: 5/16/2011 Start Qty: 1.00



Cust Item ID:

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 115 QC Quality Control | QC5- Inspect part completeness to step on W/O Memo | 0.00 0.00 | | | | | 11-6-6 | | |
| 120 HandFinish Hand Finishing | Chemical Conversion Coat per QSI005 4.1 Memo | 0.00 0.00 | | | | | | | 11/06/06 |
| 125 QC Quality Control | QC3- Inspect Part Finish Memo | 0.00 0.00 | | | | | | | 11-6-6 |

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Monday, May 16, 2011 9:19:50 AM

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Item Name: Replacement Skidtube

Start Date: 5/16/2011 **Start Qty:** 1.00

Required Date: 6/3/2011 **Req'd Qty:** 1.00

Cust Item ID:

Customer:

Reference:

Approvals: **Process Plan:** **Date:** **Tooling:** **Date:**

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

**Insp.
Stamp**

Skidtubes

0.00

Skidtubes

Memo

0.00

Skidtubes

1-Open holes to finished size as per Dwg D2650, D2650-5 Drilling Detail
(without cutting fluid)

2-Countersink crossbolt spacer holes as per Dwg D2650(without cutting fluid)

3-Deburr. Blow out chips. Grind alodine off around crossbolt spacer.

4-Bond D2654-5 web in place as per QSI 015Ensure holes line upAllow 12 Hrs. cure time before cutting□

Start Date: 11/06/06 Time: 4:10 PM

Finish Date: 11/07/09 ☐ Time: ☐

A/R ☐ ☐ Sikaflex-291 ☐ *M 116945*

Sikaflex expiry date: ☐ 12/01/15

140

QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

0.00

ⁱ Quality Control

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Cust Item ID:

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center ID

Operation Description

Set Up/ Run Hours

Tool ID

Tool #

Plan Code


**Accept
Qty**

Reject
QtyReject
Number

**Insp.
Stamp**

150

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Prep per QSI 005 and Insert cross bolt spacers D2649. Weld as per QSI 004 and Dwg D2650. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

2-Grind welds flush as per Dwg D2650. Masking Tape access to inside of the Skidtube

3-Counterbore 5/16" x 0.750" deep as per Dwg D2650Deburr

4- Install nut plate as per dwg

170

QC10- Inspect visual per QSI004- ground welds

0.00



OC

Memo

0.00

Quality Control

| W/O: | | WORK ORDER CHANGES | | | | | |
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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

180



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8 ul 06/13

190



HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

0.00

Memo

0.00

Brush alodine tube on crossbolt spacer area, do not acid etch, do not dip tube in tank.

K P m 14/06/13

205



SprayPaint

Spray Painting

Pressure Wash per QSI005 4.3

0.00

Memo

0.00

PRIME B 117319
SPRAY PAINT DELFLEET BLUE B 115 985
CLEAR DELFLEET B 117984

RT 11-06-15

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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Work Order ID 69666

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Item ID: D206-642-341

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Item Name: Replacement Skidtube

Start Date: 5/16/2011 Start Qty: 1.00



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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

215

QC14- Inspect Spray Paint

0.00



QC

Memo

0.00

Quality Control

Accept Qty: 14, Reject Qty: 06, Reject Number: 16, Insp. Stamp: ①

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Monday, May 16, 2011 9:19:50 AM



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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 220 | HandFinishing | 0.00 | | | | | | | |
| | HandFinish | | | | | 1 | 0 | 21 | 1106/122 |
| Hand Finishing | Memo 1-Install inserts & wearpads as per dwg D2922. Use a drop of Sikaflex inside insert holes before installing wearpad/wearplate. A/R <input type="checkbox"/> Sikaflex-291 <input checked="" type="checkbox"/> M 116040 Sikaflex expiry date: <input type="checkbox"/> 11/09 2-Install O-Rings D2651-3 on plugs D2651-1 with Petroleum Jelly and install plugs as per Dwg D2650. Clean excess adhesive 3-Install MS27039-4-06 Screw as per DEO 9153 4-Inspect for foreign object per QSI 024 5-Install D2646 Aft Cap and seal with SikaflexClean excess adhesive A/R <input type="checkbox"/> Sikaflex-291 <input checked="" type="checkbox"/> M 116040 Sikaflex expiry date: <input type="checkbox"/> 11/08 6-Wing Walk as per Dwg D2650-5 and QSI 005 4.4 Batch: M 117516 | 0.00 | | | | | | | |

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Monday, May 16, 2011 9:19:50 AM

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Setup Start

Stop

Cust Item ID:

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

**Insp.
Stamp**

0.00

0.00

Quality Control

0.00

0.00

Quality Control

0.00

0.00

Packaging

Packaging

Identify and pack for shipping as per PPP D206-642-341

Location: _____

PPP Rev:

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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Work Order ID 69666

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

260

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/6/30

ME
11-06-29

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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NOTE: Date & initial all entries

Picklist Print

Monday, May 16, 2011 9:19:57 AM

Page 1

Work Order ID: 69666

Parent Item: D206-642-341

Parent Item Name: Replacement Skidtube




Start Date: 5/16/2011

Required Date: 6/3/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev: H05.10.11 Added D3429-1 per CHG004 KJ/CP/JLM
 IPP Rev: I 08-09-29 revF as per dwg DD verified by: EC Est Rev: J 09-03-02 as per DSI9440 rev.a DD verified by: EC IPP rev K 10.08.03 chg ms27039-1-08 for "C" type EC verified by DD

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|-----------------|---------------|----------------|--------|
| AN960JD416  Washer | NAS1149D0463J | Purchased | No | | | | Each | 0.0000 | | 1 | | | |
| | | | | | | | 1177460 | | | (21) 11/06/12 | | | |
| CCR264SS3-3  Cherry Rivet | | Purchased | No | | | | Each | 119.0000 | | 2 | | | |
| | | | | | | | | | | (2) BB | | | |
| | | | | <u>Location</u> | | | | <u>Loc Qty</u> | | <u>Loc Code</u> | | | |
| | | | | FP-B | | | | 2 | | | | | |
| | | | | | 113973 | | | 2 | | | | | |
| | | | | ST311 | | | | 117 | | | | | |
| | | | | | 117086 | | | 117 | | | | | |
| CR3212-4-03  Cherry Rivet | | Purchased | No | | | | Each | 1,250.000 | | 2 | | | |
| | | | | <u>Location</u> | | | | <u>Loc Qty</u> | | <u>Loc Code</u> | | | |
| | | | | FP-B | | | | 12 | | | | | |
| | | | | | 110139 | | | 12 | | | | | |
| | | | | ST311 | | | | 1238 | | | | | |
| | | | | | 114859 | | | 1238 | | | | | |

| W/O: | | WORK ORDER CHANGES | | | | | |
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NOTE: Date & initial all entries

Picklist Print

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Page 2

Work Order ID: 69666

Parent Item: D206-642-341

Parent Item Name: Replacement Skidtube

Start Date: 5/16/2011

Required Date: 6/3/2011

Start Qty: 1.00

Required Qty: 1.00

D2620

Manufactured No

Each

11.0000

1



Skidtube, 206 Skidtube

Location

Loc Qty

Loc Code

LG

11

62684

3

68135

8

D2647

Manufactured No

Each

38.0000

1



Cap

Location

Loc Qty

Loc Code

LG002

38

55352

38

D2649

Manufactured No

Each

199.0000

19



Cross Bolt Spacer,

Location

Loc Qty

Loc Code

LG

85

68224

85

LG001

114

65317

1

68507

113

D2654-5

Manufactured No

Each

1.0000

1



Web

Location

Loc Qty

Loc Code

LG

1

67675

1

70399

1

DL
11/05/24

BE 11/06/01

BE 11/06/09
Q 70394 x19

DL
11/06/06

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

Monday, May 16, 2011 9:19:57 AM

Page 3

Work Order ID: 69666

Parent Item: D206-642-341

Parent Item Name: Replacement Skidtube

Start Date: 5/16/2011

Required Date: 6/3/2011

Start Qty: 1.00

Required Qty: 1.00

D2680-041 Manufactured No

Each 19.0000 1



Nut Plate

70088

Location

Loc Qty

Loc Code

ST020

19

55366

19

Each 1,092.000

56

MS27039C1-08

Purchased

No



SCREW

Location

Loc Qty

Loc Code

FP-A

1

116022

1

ST293

1091

115589

19

116373

72

117291

1000

220 Each 534.0000 54

54

ALS4-1032-130

Purchased

No



Insert

Location

Loc Qty

Loc Code

ST281

534

117331

534

220 Each 0.0000 54

54

AN960C10L

NAS1149C0332

Purchased

No



washer

M117887

(x54) M1106122

AN960JD10L

NAS1149D0332J

Purchased

No

220 Each 0.0000 2

2



Washer

M117291

(x2) M1106122

Monday, May 16, 2011 9:19:58 AM

Shop Packet Print

Page 3

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Picklist Print

Monday, May 16, 2011 9:19:58 AM

Page 4

Work Order ID: 69666

Parent Item: D206-642-341

Parent Item Name: Replacement Skidtube

Start Date: 5/16/2011

Required Date: 6/3/2011

Start Qty: 1.00

Required Qty: 1.00

D2646

Manufactured No

220 Each

40.0000 1 1



Aft Cap



u106122

Location

Loc Qty

Loc Code

FP006

39

B68280

x1

62678

39

FP-4

1

69019

1

D2651-1

Manufactured No

220 Each

272.0000 14 14



Plug



u106122

Location

Loc Qty

Loc Code

fpa

121

69018

121

B70822

x14

FP-A

151

57869

7

66445

10

67263

12

67760

122

D2651-3

Manufactured No

220 Each

600.0000 14 14



O-Ring



u106122

Location

Loc Qty

Loc Code

FP-A

600

61962

156

66956

444

x14

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Picklist Print

Monday, May 16, 2011 9:19:58 AM

Page 5

Work Order ID: 69666

Parent Item: D206-642-341

Parent Item Name: Replacement Skidtube

Start Date: 5/16/2011

Required Date: 6/3/2011

Start Qty: 1.00

Required Qty: 1.00

D3535-11 Manufactured No 220 Each 10.0000 1 1
Wearshoe

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| FP019 | 10 | |
| 68362 | 10 | |

D3535-23 Manufactured No 220 Each 28.0000 1 1
Wearshoe

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| FP021 | 28 | |
| 66236 | 2 | |
| 67594 | 13 | |
| 68342 | 13 | |

D3535-35 Manufactured No 220 Each 19.0000 1 1
Wearshoe

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| FP018 | 19 | |
| 65926 | 1 | |
| 67598 | 8 | |
| 68348 | 10 | |

D3536-11 Manufactured No 220 Each 15.0000 1 1
Gasket

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| FP011 | 15 | |
| 46649 | 1 | |
| 46715 | 4 | |
| 65574 | 10 | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
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NOTE: Date & initial all entries

Picklist Print

Monday, May 16, 2011 9:19:58 AM

Page 6

Work Order ID: 69666

Parent Item: D206-642-341

Parent Item Name: Replacement Skidtube

Start Date: 5/16/2011

Required Date: 6/3/2011

Start Qty: 1.00

Required Qty: 1.00

D3536-23 Manufactured No 220 Each 21.0000 1 1
Gasket
JH 4/06/22

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| FP011 | 21 | |
| 43406 | 1 | |
| 66560 | 20 | |

D3536-35 Manufactured No 220 Each 15.0000 1 1
Gasket
JH 4/06/22

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| FP012 | 15 | |
| 66237 | 3 | |
| 67599 | 12 | |

D3537-1 Manufactured No 220 Each 38.0000 6 6
Wearpad
JH 4/06/22

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| FP017 | 38 | |
| 63313 | 2 | 1369278 |
| 66804 | 32 | |
| 66935 | 4 | |

D3537-3 Manufactured No 220 Each 11.0000 1 1
Wearpad
JH 4/06/22

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| FP017 | 11 | |
| 35697 | 1 | 1369292 |
| 66230 | 10 | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Picklist Print

Page 7

Monday, May 16, 2011 9:19:58 AM

Work Order ID: 69666



Parent Item: D206-642-341



Parent Item Name: Replacement Skidtube

Start Date: 5/16/2011

Required Date: 6/3/2011

Start Qty: 1.00

Required Qty: 1.00

MS27039-4-06

Purchased

No

220

Each

65.0000

1

1



41 1106122

Screw

Location

Loc Qty

Loc Code

FP-A

30

115460

30

X1

ST292

35

115460

35

Monday, May 16, 2011 9:19:59 AM

Shop Packet Print

Page 7

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
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NOTE: Date & initial all entries

| QTY -1 | QTY -3 | QTY -5 | QTY -7 | PART NUMBER | DESCRIPTION |
|-----------|-----------|-----------|-----------|---------------|---|
| X | | | | D2650-1 | SKIDTUBE ASSEMBLY |
| | X | | | D2650-3 | SKIDTUBE ASSEMBLY |
| | | X | | D2650-5 | SKIDTUBE ASSEMBLY |
| | | | X | D2650-7 | SKIDTUBE ASSEMBLY |
| 1 | 1 | 1 | 1 | D2600-1-160 | EXTRUSION |
| 1 | | | | D2654-1 | WEB |
| | 1 | | | D2654-3 | WEB |
| | | 1 | | D2654-5 | WEB |
| | | | 1 | D2654-7 | WEB |
| 1 | 1 | 1 | 1 | D2646 | AFT CAP |
| 1 | 1 | 1 | 1 | D2647 | CAP |
| 17 | 18 | 19 | 23 | D2649 | CROSS BOLT SPACER |
| 16 | 18 | 14 | 22 | D2651-1 | PLUG |
| 16 | 18 | 14 | 22 | D2651-3 | O-RING |
| 1 | 1 | 1 | 1 | D2680-041 | NUT PLATE |
| 2 | 2 | | | D3286-1 | DOUBLER |
| 2 | 2 | | | D3286-3 | STUD |
| 42 | 44 | 54 | 60 | ALS7-1032-130 | INSERT (or AKS4-1032-130, ALS4-1032-130, ALS7-1032-130) |
| 2 | 2 | 2 | 2 | AN960JD10L | WASHER |
| 2 | 2 | 2 | 2 | CCR264SS3-3 | RIVET |
| 2 | 2 | 2 | 2 | CR3212-4-03 | RIVET |
| 2 | 2 | 2 | 2 | MS27039-1-08 | SCREW |
| 1 | 1 | 1 | 1 | MS27039-4-06 | SCREW |
| 1 | 1 | 1 | 1 | AN960JD416 | WASHER |
| 52 | 52 | | | CR3212-4-04 | RIVET |

F

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *69664*

PL 11-05-14

RELEASED
08-07-23

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A
- 8) WELD PER DART QSI 004
- 9) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 10) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 11) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)
- 12) DRILL Ø0.297 FOR ALS7-1032-130 INSERTS USING TEMPLATE DT8056-1 ON -1 TUBE, DT8056-3 ON -3 TUBE, DT8056-5 ON -5 TUBE, AND DT8056-7 ON -7 TUBE. INSTALL INSERTS AFTER FINISH.
- 13) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

| | | | |
|------------|--|---|--------------|
| F | DRAWING UPDATED TO CURRENT STANDARDS. SHT 6 ADDED. ALL SECTION AND DETAIL VIEWS TRANSFERRED TO SHT 6. SHT 1 IN PL PART D2649 QTY UPDATED. SHT 6 SECT C-C GRIND INSTRUCTIONS DELETED FROM NOTE 7 (SEE NCR 239). | AJS | 08.08.08 |
| E | REMOVE CBORE, CHG DRILL, ADD CHAMFER | CP | 06.03.30 |
| D | REDRAW; INCORP. DE09136/9153/9163 MOD GROUND HANDLING ON D2650-1/-3 | CP | 04.05.17 |
| C | CHANGE HOLE PATTERN AND FRONT END | DS | 97.10.29 |
| B | AS MANUFACTURED CHANGES | DS | 97.06.26 |
| A | NEW ISSUE | DS | 97.03.25 |
| REV. | DESCRIPTION | BY | DATE |
| DESIGN | DS | DART AEROSPACE USA, INC | |
| DRAWN | AJS | PORT HADLOCK, WA | |
| CHECKED | <i>[Signature]</i> | DRAWING NO. | REV. F |
| MFG. APPR. | <i>[Signature]</i> | D2650 | SHEET 1 OF 6 |
| APPROVED | <i>[Signature]</i> | TITLE | SCALE |
| DE APPR. | <i>[Signature]</i> | 206/407 SKIDTUBE ASSEMBLIES | NTS |
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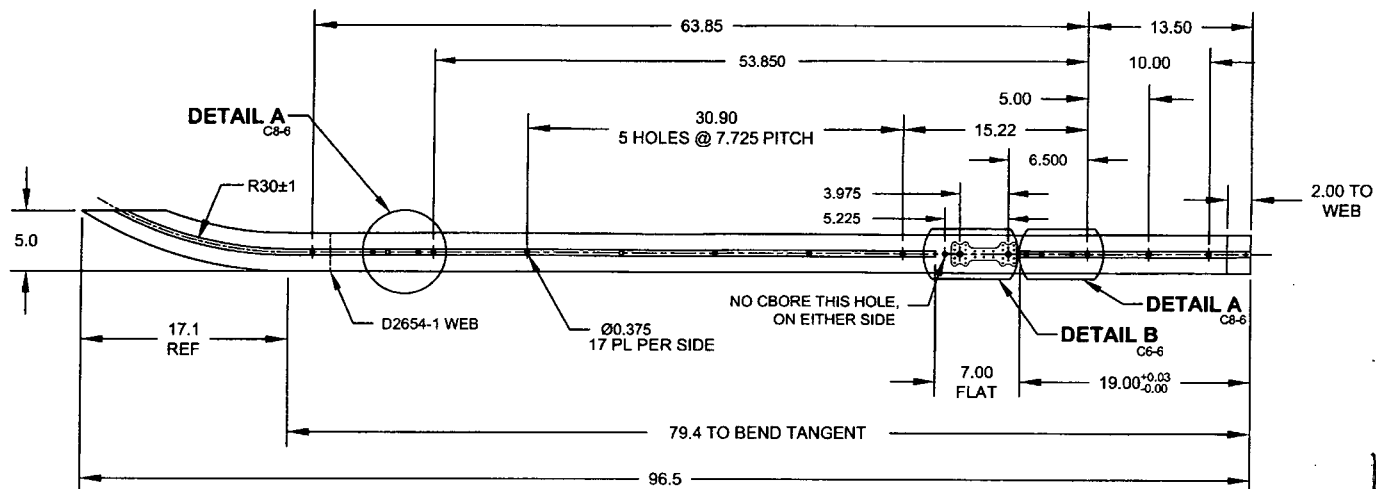
| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

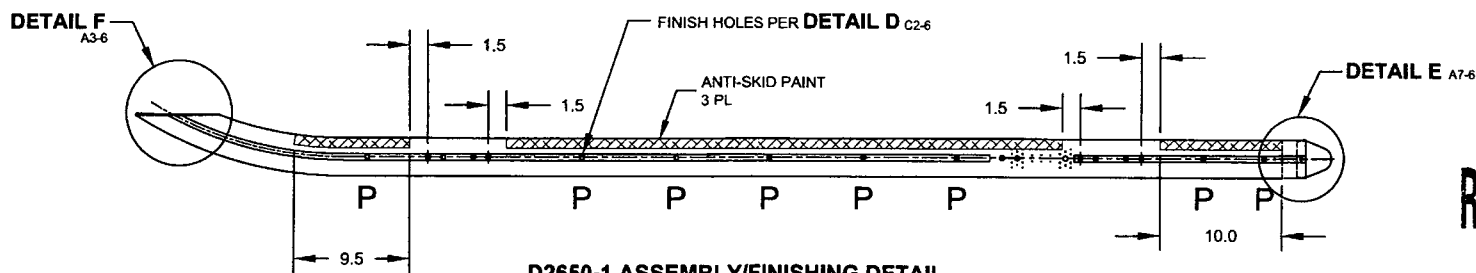
| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries



D2650-1 BENDING/DRILLING DETAIL

W/B 69466



D2650-1 ASSEMBLY/FINISHING DETAIL

RELEASED
88 09 22 / 114

| | | | |
|------------|----------|---|--------------|
| DESIGN | DS | DART AEROSPACE USA, INC | |
| DRAWN | AJS | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. | REV. F |
| MFG. APPR. | | D2650 | SHEET 2 OF 6 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | 206/407 SKIDTUBE ASSEMBLIES | NTS |
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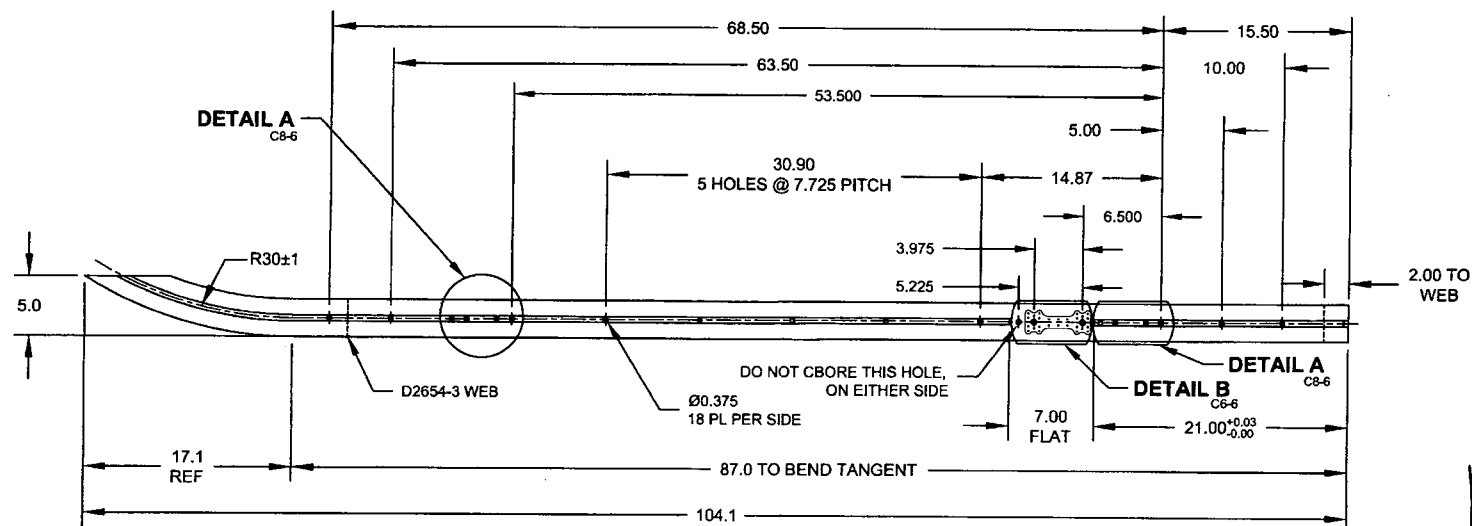
| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

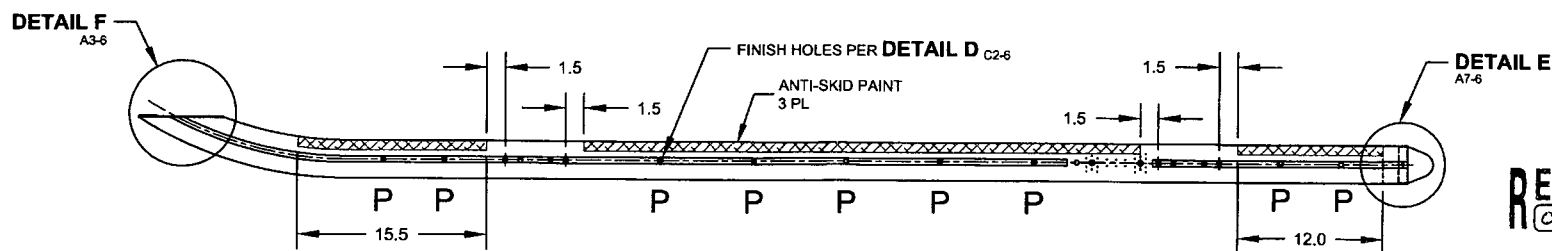
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries



D2650-3 BENDING/DRILLING DETAIL



D2650-3 ASSEMBLY/FINISHING DETAIL

RELEASED
08 07 22 1111

| | | | |
|------------|----------|--|--------------|
| DESIGN | DS | DART AEROSPACE USA, INC | |
| DRAWN | AJS | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. | REV. F |
| MFG. APPR. | | D2650 | SHEET 3 OF 6 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | 206/407 SKIDTUBE ASSEMBLIES | NTS |
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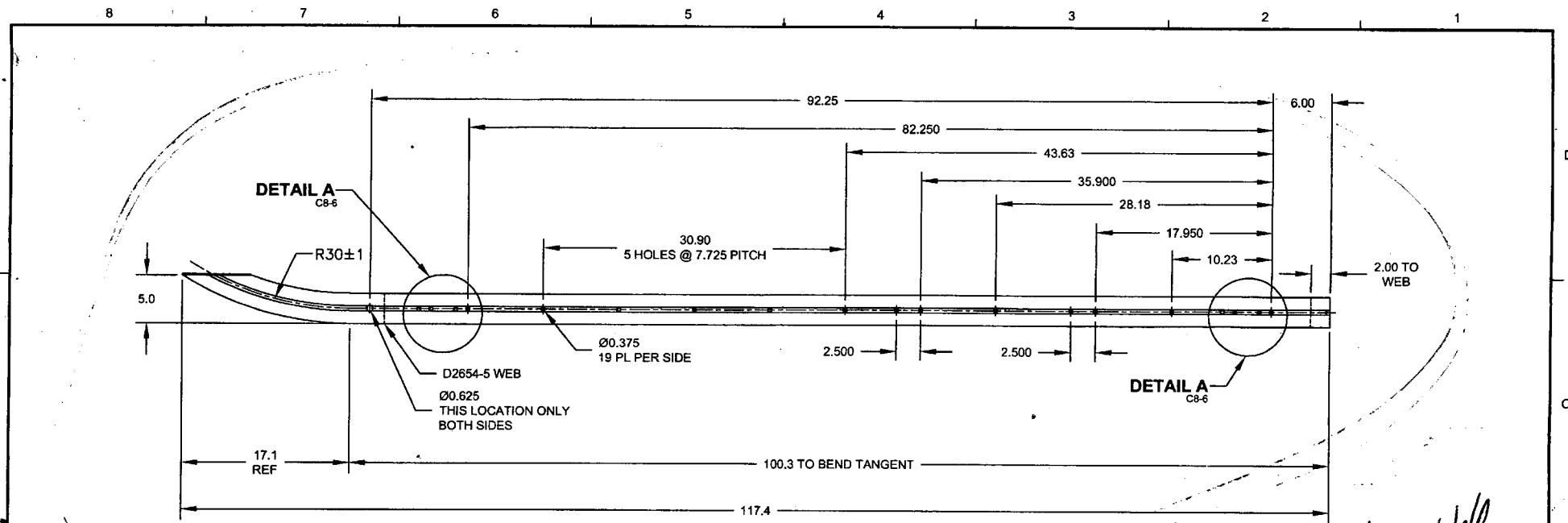
| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

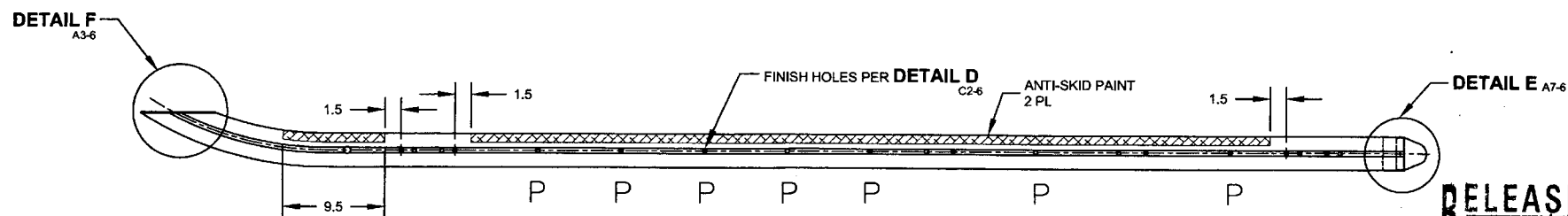
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries



D2650-5 BENDING/DRILLING DETAIL



D2650-5 ASSEMBLY/FINISHING DETAIL

RELEASED
08-09-27-117

| | | | |
|------------|----------|--|--------------|
| DESIGN | DS | DART AEROSPACE USA, INC | |
| DRAWN | AJS | PORT HADLOCK, WA | |
| CHECKED | J | DRAWING NO. | REV. F |
| MFG. APPR. | E | D2650 | SHEET 4 OF 6 |
| APPROVED | AP | TITLE | SCALE |
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| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

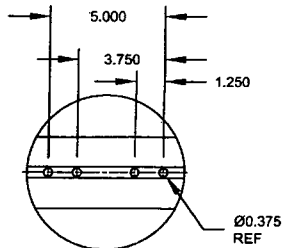
| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

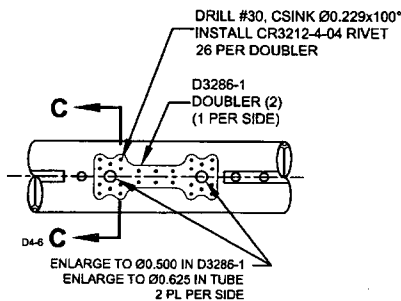
| NCR: _____ | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries



DETAIL A
SCALE 2X

C2-2
D7-2
C2-3
D7-3
C2-4
D7-4
C2-5
D6-5



DETAIL B
SCALE 2X

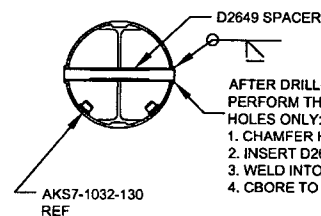
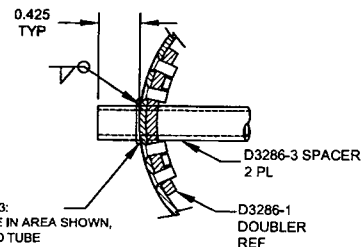
C3-2
C3-3

- TO INSTALL D3286-1/3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH ROUND TUBE
 2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
 3. ENLARGE HOLES IN D3286-1 TO Ø0.500
 4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.030x45°
 5. RIVET D3286-1 TO TUBE
 6. INSERT D3286-3 SPACER
 7. WELD IN PLACE.



ORIENTATION OF
D2680-041

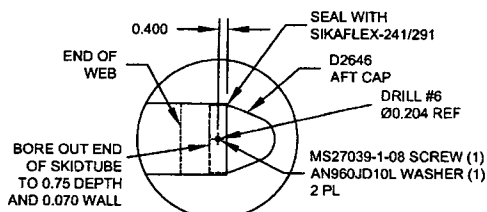
SECTION C-C C7-6
SCALE NONE



DETAIL D
FOR Ø0.375 HOLES ONLY
SCALE 3X

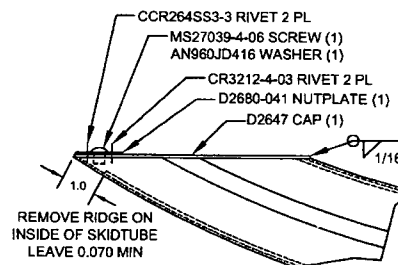
B4-2
B4-3
B4-4
B4-5

- AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.030 X 45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. CBORE TO Ø0.313 X 0.75 DP



DETAIL E
SCALE 2X

B2-2
B2-3
B1-4
B1-5






DETAIL F
SCALE NONE

B8-2
B8-3
B8-4
B8-5

- DETAIL F NOTES:**
1. CUT TUBE LEVEL
 2. REMOVE RIDGE ON FWD SIDE
 3. LOCATE D2647 (TRIM AS NECESSARY)
 4. WELD D2647 IN PLACE PER DART QSI 004
 5. GRIND FLUSH
 6. RIVET D2680-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D2680-041 PRIOR TO FINISH

RELEASED
05-09-22-13

| | | | |
|------------|---|--|--------------|
| DESIGN | DS | DART AEROSPACE USA, INC | |
| DRAWN | AJS | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. | REV. F |
| MFG. APPR. |  | D2650 | SHEET 6 OF 6 |
| APPROVED |  | TITLE | SCALE |
| DE APPR. |  | 206/407 SKIDTUBE ASSEMBLIES | NTS |
| DATE | 08.08.08 | COPYRIGHT © 1987 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC. | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
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| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

NO. 252

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 66358
Part number: D206 642 541
Description: 206
Welding Process: Tig[☒] Mig[]
Base material: Aluminum
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Pat Brown Date of Test Coupon 11-05-09

Welder Barclay Elliott Date of Test Coupon 11-05-09

The above named individual is qualified in accordance with AWS D17.1.2001 to weld